

137

INTERNATIONAL GEOLOGY REVIEW

Volume 13, 1971

LIBRARY USE ONLY

UNIVERSITY OF HAWAII LIBRARY



published monthly by the
AMERICAN GEOLOGICAL INSTITUTE

2201 M Street, N.W.
Washington, D.C. 20037

INTERNATIONAL GEOLOGY REVIEW is published monthly, with a supporting grant from the National Science Foundation. Papers are selected for translation from a large number of Russian geological periodicals in all disciplines, and sometimes from the geological literature in other languages. Non-serial works are reviewed, and at times significant portions are translated and published in IGR. Prepublication announcement of geologically important Soviet literature is a regular feature. IGR has an annual subject and author index.

Selection of papers for translation and publication is made on the advice of the AGI Translations Committee and the liaison representatives of AGI member societies. However, readers are encouraged to suggest significant papers from the foreign literature for consideration. Comments and discussions of papers published in IGR are invited.

INTERNATIONAL GEOLOGY REVIEW STAFF

Thomas F. Rafter, Jr., Manager,
AGI Translations Program

V.P. Sokoloff, Translations and
Review Editor

Wendy Cookson, Editor

Nancy Dutro, Associate Editor

LIAISON REPRESENTATIVES

Martin F. Glaessner, Australia
Alfred J. Hermont, SEG

Benjamin F. Leonard, SECG
Arthur A. Meyerhoff, AAPG

David B. Stewart, MSA
Robert I. Tilling, GS
Frank C. Whitmore, Jr., SVP

AGI TRANSLATIONS COMMITTEE

John Lemish, Chairman

Eugene A. Alexandrov

Douglas C. Alverson

Earl Ingerson

AMERICAN GEOLOGICAL INSTITUTE

Linn Hoover, Executive Director

Joel Lloyd
Director of Science Information

Thomas F. Rafter, Jr., Assistant
Director of Science Information

JANUARY

Petrov, V. G. NEW DATA ON PROTEROZOIC VOLCANISM IN THE NORTHERN PART OF THE YENISEY RIDGE	1
Petrovskiy, A. D. NOVACULITE RAW MATERIAL IN THE SOVIET UNION	7
Vladimirov, B. M., Odintsov, M. M., Rasskazchikov, A. N., and Tverdokhlebov, V. A. BASIC FEATURES OF GEOLOGIC HISTORY OF THE WESTERN AFRICAN AND SIBERIAN PLATFORMS	16
Tikhomirov, V. V. AN ATTEMPT TO ANALYZE THE DEVELOPMENT OF GEOLOGY AS A SCIENCE	22
Mikhaleva, L. A., and Skuridin, V. A. GRANITE FORMATION OF THE ANATECTIC TYPE IN ZONES OF COMPRESSION IN GORNYY ALTAY	30
Kalinin, D. V., and Ovchinnikova, O. N. KINETICS OF HYDROTHERMAL SYNTHESIS OF DIOPSIDE IN THE SYSTEMS CaO-MgO-2SiO ₂ AND CaCO ₃ -MgCO ₃ -2SiO ₂ AT WATER VAPOR PRESSURE OF 500 atm	40
Voronov, A. N., and Vishnyakova, G. I. LAWS OF NITROGEN DISTRIBUTION IN UNDERGROUND FLUIDS OF THE RUSSIAN PLATFORM	43
Rudnitskaya, D. I. FACTORS GOVERNING SEISMIC WAVE VELOCITIES IN TERRIGENOUS DEPOSITS OF THE SOUTHEASTERN PART OF THE WEST SIBERIAN LOWLANDS	50
ALEKSANDR PAVLOVICH VINOGRADOV (ON HIS 75th BIRTHDAY)	57

REVIEW SECTION

Vasil'yev, V. G. et al. ORIGIN OF DIAMONDS	60
Kukharensko, A. A., Editor MINERALOGY AND GEOCHEMISTRY	61
Yushko-Zakharova, O. E. et al. GEOCHEMISTRY, MINERALOGY, AND DETERMINATIONS OF ELEMENTS OF THE PLATINUM GROUP	62
Voytkovich, G. V. et al. SHORT HANDBOOK OF GEOCHEMISTRY	63
Kharabayev, I. Kh., Chief Editor AURIFEROUS FORMATIONS AND METALLOGENIC CHARACTERISTICS OF GOLD IN UZBEKISTAN	63
Marakushev, A. A., Executive Editor METASOMATISM AND OTHER PROBLEMS OF PHYSICOCHEMICAL PETROLOGY	64
Lukashev, V. K. GEOCHEMISTRY OF QUATERNARY LITHOGENESIS	64
Genkin, A. D. MINERALS OF PLATINUM METALS IN COPPER-NICKEL ORES OF NORIL'SK	65

JANUARY (concluded)

Kulinkovich, A. Ye. TO THE GEOLOGIST ON CYBERNETICS	65
Oleynikov, A. N., and Mkhaylova, Yu. I. APPLICATION OF PUNCH CARDS IN GEOLOGY	65
Arabadzhi, M. S. et al. EXPERIENCE WITH APPLICATION OF MATHEMATICAL METHODS IN GEOLOGY	65
Voychuk, V. V., and Marchenko, A. S. BACKGROUND AND VARIATION OF ELEMENTS OF THE PHYSICO- GEOGRAPHICAL ENVIRONMENT	66
ESSAYS IN PHYSICAL GEOGRAPHY OF GEORGIA	66
Gvozdetskiy, N. A., Editor PHYSICO-GEOGRAPHICAL REGIONALIZATION OF THE USSR	66
Pokshishevskiy, V. V., Chief Editor CARTOGRAPHY: SCIENCE REVIEWS SERIES	66
Shnitnikov, A. V., Executive Editor READINGS IN MEMORY OF LEV SEMENOVICH BERG	67
Nikol'skaya, V. V., and Khomentovskiy, A. S., Executive Editors SOUTHERN PART OF FAR EAST	67
Gerasimov, F. Ya. et al. BRIEF TOPOGRAPHIC-GEODETIC GLOSSARY-HANDBOOK	68
Tenner, D. D., Executive Editor GEOLOGY, PROPERTIES, AND USE OF VERMICULITE	68
Vasil'yev, V. G., and Vysotskiy, I. V., Editors GEOLOGY OF OIL (reference book on deposits in USSR, elsewhere)	68
Rozovski, L. B. INTRODUCTION TO THEORY OF GEOLOGICAL RESEMBLANCE AND MODELING. APPLICATION OF NATURAL ANALOGS AND QUANTITATIVE CRITERIA OF RESEMBLANCE IN GEOLOGY	68
Dodin, A. L. et al. STRATIGRAPHY OF PRECAMBRIAN FORMATIONS IN EASTERN SAYAN	69
Popova, G. Z. ANNULAR AND LINEAR MORPHOSTRUCTURE OF FOLDED TERRAIN IN KAZAKHSTAN	69

REFERENCE SECTION

PREPUBLICATION NOTICES OF NEW BOOKS (NOVYYE KNIGI), 1970, nos. 33-37	70
--	----

IGR - BOOK SECTION

Ozerova, Nina A. PRIMARY DISPERSION HALOS OF MERCURY	1
---	---

FEBRUARY

Afanas'yev, G. D. et al. RESULTS OF ANALYSES OF STANDARD GEOCHRONOLOGY SAMPLES	73
---	----

FEBRUARY (continued)

Vasilenko, V. B., and Rengarten, N. V. EXPERIMENTS IN THERMOLUMINESCENCE ANALYSIS OF PALUDINA SHELLS FOR CORRELATING QUATERNARY DEPOSITS	79
Fotiadi, E. E., and Karatayev, G. I. NEOTECTONICS, MODERN MOVEMENTS OF TERRESTRIAL CRUST AND THE MOHOROVICIC SURFACE	86
Ustiyev, Ye. K. BASIC CONCEPTS AND TERMS OF THE THEORY OF MAGMATIC FORMATIONS	95
Burtman, V. S. CONTRIBUTION TO STUDY OF EVOLUTION OF THE FOLDING PROCESS WITHIN THE TECTONIC CYCLE	111
Belousov, A. F. BASIC QUESTION IN ORIGIN OF THE MAGMAS OF BASALTOID ASSOCIATIONS	118
Krylov, S. V. THE GENTLE SLOPES OF SEISMIC BOUNDARIES IN THE BASE	123
Gordiyenko, V. V. CONCENTRATIONS OF Li, Rb, AND Cs IN POTASH FELDSPAR AND MUSCOVITE AS CRITERIA FOR ASSESSING THE RARE-METAL MINERALIZATION IN GRANITE PEGMATITES	134
Aver'yanov, I. P., Zhizhin, D. P., and Tyutrin, I. I. PROSPECTS OF FINDING COMMERCIAL SULFUR DEPOSITS IN THE KURIL ISLANDS	143
Petersil'ye, I. A., and Yashina, R. M. INVESTIGATION OF THE GAS PHASE AS AN AID IN DETERMINING THE ORIGIN OF TUVA ALKALIC ROCKS	149
Lokhova, G. G. MECHANISM AND KINETICS OF HYDROTHERMAL REACTIONS OF FORMATION OF IRON AMPHIBOLE IN THE RIEBECKITE-ARFVEDSONITE SERIES AT 500°C . . .	161
Stupnikova, N. I., Zykov, S. I., and Zhirov, K. K. RADIOLOGICAL AGE OF PEGMATITE VEINS OF NORTHERN KARELIA	163
Bulavin, B. P. RELICT FEATURES OF LOESS IN THE SEA OF AZOV REGION	179
Davydchenko, A. G., Lisitsina, Ye. Ye., Bezrukov, G. N., and Gorokhov, S. S. EXPERIMENTAL MINERAL PRODUCTION IN KIMBERLITES AT HIGH TEM- PERATURES AND PRESSURES	186
Anisimov, L. A. OCCURRENCE OF HYDROGEN SULFIDE IN SEDIMENTS	191
Slobodskoy, R. M. FORMATION OF PTYGMATIC VEINS IN CONTACT AUREOLES OF GRANITOID PLUTONS	198
Khamrabayev, I. Kh. FEMIC MINERALS AS A CRITERION OF THE POTENTIAL METALLIC ORE CONTENT OF MAGMATIC FORMATIONS AND SOME ASPECTS OF THE POLARITY OF THEIR COMPOSITIONS AND PARAGENESES	205
Bulina, L. V. DISTINCTIONS IN SPATIAL DISTRIBUTION OF THE LOWER FRINGE OF MAGNETIZED BODIES IN CONSOLIDATED TERRESTRIAL CRUST	217

FEBRUARY (continued)

Chikov, B. M., Yunov, A. Yu., and Belyayev, I. V. STRUCTURE OF AQUATORIUM OF THE SEA OF OKHOTSK AND ITS RELATION TO COASTAL FOLDED COMPLEXES	224
Krats, K. O., Lobach-Zhuchenko, S. B., and Chekulayev, V. P. EARLY PRECAMBRIAN GRANITOGENESIS IN BAL TIC SHIELD (GEOCHEMICAL ASPECT)	234
Sobolev, Ye. V. NATURE OF YELLOW COLOR OF DIAMONDS	242
Zashchinskiy, L. A., Mikov, A. D., and Gury sheva, T. I. SURVEYS FOR DENSITY AND BORON CONTENT TO DETERMINE LIMITS OF AURIFEROUS PHENOCRYSTS	244

REVIEW SECTION

Gerasimov, I. P., Chief Editor THE LAST GLACIER SHEET OVER THE NORTHWEST OF EUROPEAN USSR	247
Popov, A. I., Editor PROBLEMS OF CRYOLITHOLOGY	247
Maksimov, S. P. GEOLOGY OF OIL AND GAS FIELDS IN VOLGA-URAL OIL-GAS PROVINCE . . .	247
Neruchev, S. G. SOURCE ROCKS SERIES AND MIGRATION OF OIL	248
Uspenskiy, V. A. INTRODUCTION TO GEOCHEMISTRY OF OIL	248
Gudok, N. S. STUDIES OF PHYSICAL PROPERTIES OF POROUS MEDIA	249
Dobrynin, V. M. DEFORMATIONS AND CHANGES IN PHYSICAL PROPERTIES OF RESERVOIR ROCKS	249
Melik-Pashayev, V. S. EXPLORATION OF OIL DEPOSITS	250
Mashkovich, K. A. PALEOTECTONIC METHODS IN PROSPECTING FOR OIL AND GAS	250
Fridman, A. I. NATURAL GASES IN DEPOSITS OF ORES	250
Nakovnik, N. I. SECONDARY QUARTZITES OF THE USSR AND ASSOCIATED DEPOSITS OF ECONOMIC MINERALS	251
Ivankin, P. F. MORPHOLOGY OF MAGMATOGENIC ORE FIELDS EXPLORED IN DEPTH	251
Abramovich, E. L. STRATIFORM DEPOSITS OF LEAD IN KALKANATA	252
Bok, I. I., Executive Editor NEW FINDINGS IN RESEARCH ON ORES OF DZHEZKAZGAN	252
Dyufur, M. S. et al. ALPINE METAMORPHIC COMPLEX IN EASTERN PART OF CENTRAL PAMIR	253

FEBRUARY (concluded)

Lisitsyn, A. E.	
GRANITIZATION OF PRECAMBRIAN ROCKS IN THE KOKCHETAVIAN BLOCK AND GENESIS OF MAGNESIAL SKARNS	253
Vasil'yev, V. A.	
ANCIENT WEATHERED CRUSTS OVER CRYSTALLINE BASE OF SOUTHERN PRIBALTIKA	254
Lyubimova, E. A.	
THERMICS OF EARTH AND MOON	254
Yatsko, I. Ya., Executive Editor	
GEOLOGY OF SHORES AND FLOORS OF THE BLACK AND AZOV SEAS, IN USSR BOUNDARIES	254
Yakutseni, V. P.	
GEOLOGY OF HELIUM	255

REFERENCE SECTION

PREPUBLICATION NOTICES OF NEW BOOKS (<u>NOVYYE KNIGI</u>), 1970, nos. 38-42	256
---	-----

MARCH

Kudel'skiy, A. V.	
IODIDE WATERS OF KOPET-DAG	259
Borisov, A. A.	
RADIATION CONDITIONS IN DIFFERENT GEOLOGICAL PERIODS FOR USSR TERRITORY	265
Artyushkov, Ye. V.	
THE LAYER OF DECREASED VISCOSITY IN THE EARTH'S UPPER MANTLE AND THE PHENOMENA RELATED TO IT	270
Kaptel'-Kamenshchikov, V. A., Rostov, V. G., and Simkin, G. S.	
STRUCTURE OF MERCURY ORE DEPOSIT AT TERLIGKHAY AND HISTORY OF ITS ORIGIN	278
Pronin, A. A.	
LATERAL STRUCTURAL CONNECTIONS OF BAYKALIDES AND EARLY CALEDONIDES IN URALS	283
Baksht, F. B.	
ZONES WHERE MAGNETIC FIELD WEAKENS OVER GOLD-ORE DEPOSITS OF GORNIY ALTAY	290
Kudryatsev, V. A., Melamed, V. G., and Sharapov, V. N.	
DYNAMICS OF TEMPERATURE FIELD IN THE HALO OF EMPLACED PLUTONS, DURING SEVERAL METAMORPHIC REACTIONS	294
Denisov, S. V.	
PERSPECTIVES IN RECONNAISSANCE FOR COASTAL-MARINE PLACERS ON SOUTHERN AND WESTERN CONTINENTAL SHORES OF OKHOTSK SEA	301
Onikiyenko, S. K.	
ORIGIN OF BANDED AND FLOW STRUCTURES IN ACIDIC ROCKS OF SUBVOLCANIC AND DIKE COMPLEXES	305
Suchkov, P. N., Bushev, A. G., and Davidenko, I. V.	
SOURCES OF MUSCOVITE IN GRANITE PEGMATITES	311

MARCH (continued)

Pavlovskiy, Ye. V. EARLY STAGES IN DEVELOPMENT OF THE EARTH'S CRUST	318
Barabanov, V. F. GEOCHEMISTRY OF TUNGSTEN	332
Knyazev, V. S., and Shnip, O. A. MAGMATIC ROCKS IN THE BASE OF THE TURANIAN PLATE	345
Borisov, Ivan A NEW TYPE OF POTASSIUM-ALKALIC ROCKS (BULGARITES) IN BULGARIA	357
Sinit syn, V. M. FOSSILIZATION OF GASES IN SEDIMENTARY SHELL AND ITS SIGNIFICANCE IN EVOLUTION OF EARTH'S ATMOSPHERE	365
Polyanin, V. A., and Fayzullin, R. M. MOLASSOID TYPE OF KAMENSKA AURIFEROUS CONGLOMERATES IN EASTERN ZABAYKAL'YE	372
Gorbunov, G. I., Chernyshov, N. M., and Bukovshin, V. V. A NEW NICKELIFEROUS PROVINCE IN AREA OF THE VORONEZH CRYSTALLINE MASSIF	377
Sobolev, V. S., Bakumenko, I. T., Dobretsov, N. L., Gobrelev, N. V., and Khlestov, V. V. THE PHYSICO-CHEMICAL CONDITIONS OF PETROGENESIS AT DEPTH	393
Ishutin, V. V. DEEP STRUCTURE OF THE SOUTHERN SLOPE OF THE TURANIAN PLATE, AS INDICATED BY REGIONAL GEOPHYSICAL INVESTIGATIONS BY REFRACTED-WAVE METHOD	403
Vassoyevich, N. B., Vysotskiy, I. V., Sokolov, B. A., and Tatarenko, Ye. I. OIL-GAS POTENTIAL OF LATE PRECAMBRIAN DEPOSITS	407
Gorfunkel', M. V., and Slepakova, G. I. ORIGINAL THICKNESS OF SALT IN THE CASPIAN DEPRESSION, FROM GEOPHYSICAL DATA	419
Leleshus, V. L. DETERMINATION OF THE DEGREE OF DIFFERENCE BETWEEN FOSSIL ORGANISMS	422
Leleshus, V. L. CONTRIBUTION TO METHODS FOR DETERMINING VARIABILITY OF CHARACTERS	425
Leleshus, V. L. PALAEOZOOGEOGRAPHY IN ORDOVICIAN, SILURIAN, AND EARLY DEVONIAN ON BASIS OF TABULATOMORPH CORALS AND THE BOUNDARIES OF THE SILURIAN SYSTEM	427

REVIEW SECTION

Yermakov, N. P., Executive Editor MINERALOGICAL THERMOMETRY AND BAROMETRY, VOL. II	435
Nurok, G. A. et al. MINING MARINE AND OCEANIC FLOORS FOR ECONOMIC MINERALS	436
Sirota, N. N., Editor CHEMICAL BOND IN CRYSTALS	436

MARCH (concluded)

Lyakhovich, V. V. ACCESSORY MINERALS. THEIR GENESIS, COMPOSITION, CLASSIFICATION AND INTERPRETATION	436
Beus, A. A., and Dikov, Yu. P. GEOCHEMISTRY OF BERYLLIUM IN ENDOGENIC MINERALOGENESIS (AND EXPERIMENTAL MODELING OF THE PROCESS)	437
Barabanov, V. F., Executive Editor MINERALOGY AND GEOCHEMISTRY OF WOLFRAMITE ORE DEPOSITS	437
Bezsmertnaya, M. S. et al. IDENTIFICATION OF TELLURIDES UNDER MICROSCOPE	438
Gerngardt, N. E. LEUCOXENE, A NEW KIND OF COMPLEX MINERAL RAW MATERIAL	438
DATA OF HYDROCHEMISTRY, VOL. XLVII	438
Sidorov, V. M. CHEMICAL ANALYSES OF PRECAMBRIAN GRANITOIDS OF UKRAINE	439
Galimov, E. M. GEOCHEMISTRY OF STABLE ISOTOPES OF CARBON	439
Borzunov, V. M. et al. PROSPECTING AND EXPLORATION OF SOURCES OF MINERAL RAW MATERIALS FOR CONSTRUCTION MATERIALS INDUSTRY	440
Lomtadze, V. D., Executive Editor PHYSICOMECHANICAL PROPERTIES AND PROBLEMS OF ORIGIN OF LOESS ROCKS IN SIBERIA	441
Zatenatskaya, N. P., and Sofokhina, I. A. DIFFUSIONAL LEACHING OF CLAYS AND ITS EFFECT ON ENGINEERING- GEOLOGICAL PROPERTIES OF CLAYEY ROCKS	441
Vodzinskas, E. V., and Kadunas, V. B. CARBONATE RAW MATERIALS IN LITHUANIAN SSR (DOLOMITES AND LIMESTONES)	441
Znamenskaya, N. S. RIDGE-MOVEMENT OF STREAM BED SEDIMENTS	441
Peyve, A. V., Executive Editor PROBLEMS OF LUNAR GEOLOGY	442
Akhvlediani, D. G. STRATIGRAPHY OF UPPER CRETACEOUS SEDIMENTS ON SOUTHERN PERIPHERY OF DZIRULIAN MASSIF AND NORTHERN SLOPE OF TRIALETIAN KHREBET, AS INDICATED BY FORAMINIFERAL FAUNA	443
Shnyukov, E. F. et al. DEVELOPMENT OF CONCRETIONS IN MESOCENOZOIC SEDIMENTS IN SOUTHERN PART OF UKRAINE	443
Saks, V. N., Executive Editor WATER RESOURCES AND WATER ECONOMY OF SIBERIA	443
Reverdatto, V. V. FACIES OF CONTACT METAMORPHISM	443
Filippova, B. S., Editor THE BAYKALIAN RIFT	444

APRIL

Vinogradov, V. I., Badalov, S. T., and Turesebekov, A. POSSIBLE ROLE OF SEDIMENTARY SULFATES IN ENDOGENIC FORMATION OF ORES IN KARMAZAR	445
Vakhrushev, V. A. PETROGRAPHIC INDICATIONS OF PARTING OF MAGMATIC MELT INTO SILICATE AND SULFIDE FRACTIONS	453
Yarosh, P. Ya., Buslayev, F. P., and Nikulova, A. A. DIAGENETIC BRECCIOID AND BRECCIA STRUCTURES OF ORES IN SOUTH URALIAN DEPOSITS OF PYRITES	463
Zachernyuk, A. P., Kats, B. S., and Khoroshilov, L. V. DISTINCTIONS IN STRUCTURE OF URANIUM DEPOSITS ASSOCIATED WITH SUBVOLCANIC PORPHYRITES	470
Kuznetsov, V. A., and Obolenskiy, A. A. GENESIS OF MERCURY ORE DEPOSITS AND SOURCES OF THE SUBSTANCE IN THE ORES	477
Bellavin, O. V., Vagshal', D. S., and Nirenshteyn, V. A. THE SHARTASH GRANITIC PLUTON (CENTRAL URAL) AND THE RELATED GOLD-ORE MINERALIZATION	487
Kazanskiy, V. I., Krupennikov, V. A., and Rozanov, Yu. A. CONDITIONS OF LOCALIZATION OF MESOZOIC AURIFEROUS METASOMATITES IN CRYSTALLINE BASE OF CENTRAL ALDAN REGION	491
Dobrovol'skaya, M. G., and Boyarskaya, R. V. SPHALERITE WITH A HIGH TIN CONTENT IN ORES OF THE BLAGODAT (EASTERN TRANSBAYKAL REGION)	500
Baranova, Yu. P., and Biske, S. F. IMPORTANCE OF STRATIGRAPHIC AND GEOMORPHOLOGICAL RESEARCH IN DESIGN OF NEOTECTONIC MAPS (NORTHEAST OF USSR)	507
Krylov, S. V., Mishen'kin, B. P., Krupskaya, G. V., Petrik, G. V., and Yanushevich, T. A. STRUCTURE OF TERRESTRIAL CRUST ON DSS TRAVERSE ACROSS BAYKALIAN RIFT ZONE	514
Gafarov, R. A. ABYSSAL STRUCTURE OF THE BASE IN ZONE OF ARTICULATION OF THE EAST EUROPEAN PLATFORM WITH THE URAL	520
Davoyan, M. O. AREA OF MODERN GLACIATION ON MT. ARAGATS AND THE DIMINUTION OF FIRN BASINS	530
Ivonin, I. P. A METHOD OF DETERMINING THE BOTTOMS AND TOPS OF SEQUENCES IN CARBONATE DEPOSITS	534
Sheynmann, Yu. M. ENERGETICS OF CERTAIN ABYSSAL GEOLOGICAL PROCESSES	537
Kukhareno, A. A. THE PROBLEM OF ISOMORPHISM IN MINERALOGY	546
Godlevskiy, M. N. STATISTICAL PROCESSING OF A. N. ZAVARITSKIY'S PETROCHEMICAL DIAGRAMS FOR EFFUSIVE ROCKS	558
Delitsin, I. S., Markov, V. K., Ryabinin, Yu. N., and Petrov, V. P. CONVERSION OF MUSCOVITE AT HIGH PRESSURES AND TEMPERATURES	569

APRIL (continued)

Leonov, G. P. HISTORISM AND ACTUALISM IN GEOLOGY	575
Goncharov, G. N., Ostanevich, Yu. M., and Tomilov, S. B. INVESTIGATION OF IRON SULFIDES WITH AID OF THE MOSSBAUER EFFECT . . .	584
Aver'yanov, I. P., Znamenskiy, V. S., Mosionidz, K. A., and Piskunov, B. N. NEW TYPE OF SULFUR MINERALIZATION ON URUP ISLAND (KURILS)	592
Velinskiy, V. V. DEGASSING OF THE UPPER MANTLE AS THE PRINCIPAL FACTOR IN GENESIS OF MAGMAS	595
Sharko, E. D. NATURE AND PROPERTIES OF VARLAMOFFITE (OXIDATION PRODUCTS OF STANNITE)	603
Distanov, E. G., and Kovalev, K. R. MAGNESIAN METASOMATISM IN PYRITE-POLYMETALLIC DEPOSITS (AS DEMONSTRATED BY EASTERN TUVA)	615

REVIEW SECTION

Fedorchuk, V. P. WALLROCK ALTERATIONS AT DEPOSITS OF MERCURY ANTIMONY ORES	624
Zaritskiy, P. V. MINERALOGY AND GEOCHEMISTRY OF DIAGENESIS IN COAL-BEARING SEDIMENTS, AS IN DONETS BASIN	624
Tolmachev, A. I., General Editor ARCTIC OCEAN AND ITS SHORES IN THE CENOZOIC	625
Paskoff, Roland RECHERCHES GEOMORPHOLOGIQUE DANS LE CHILI SEMI-ARIDE	626
Leont'yev, O. K. FLOOR OF THE OCEAN	626
Bezrukov, P. L., Executive Editor SEDIMENTATION IN PACIFIC OCEAN (Two books)	627
Milanovskiy, E. E. RECENT TECTONICS OF CAUCASUS	627
Subbotin, S. I., Naumchik, G. L., and Rakhimova, I. Sh. MANTLE OF EARTH AND TECTOGENESIS	627
Gzovskiy, M. V. BASIC PROBLEMS OF TECTONOPHYSICS AND TECTONICS OF THE BAYDZHANSAY ANTICLINORIUM	628
Perel'man, A. I. GEOCHEMISTRY OF LANDSCAPE	628
Abramovich, D. I., Executive Editor COMPREHENSIVE ASSIMILATION OF WATER RESOURCES IN THE OB' RIVER BASIN	629
HYDROGEOLOGY OF THE USSR	
TOM LXIV: ARKHANGEL'SK AND VOLOGDA TERRITORIES (A. A. Makkaveyev, Editor)	629

APRIL (concluded)

TOM XII: AZERBAIDZHANIAN SSR (N. V. Rogovskaya, Editor)	630
TOM XXI: CHITA TERRITORY (N. I. Tolstikhin, Editor)	630
TOM XXXII: LITHUANIAN SSR (A. R. Kondratas, Editor)	630
Per'kov, N. A. et al. ALBUM OF TYPICAL LOGS OF WELLS IN OIL AND GAS DISTRICTS, USSR	630
Mkrtchyan, S. S., Chief Editor GEOLOGY OF ARMENIAN SSR	630

MAY

Pospelov, G. L. MAIN STRUCTURAL-ENERGY LEVELS OF POSSIBLE STATES OF MACROMASSES OF THE EARTH.	631
Karpov, A. F., and Kyabbi, M. E. NATIONAL RESERVES AND RAW MATERIALS OF COMBUSTIBLE SHALE MINING INDUSTRY OF USSR	641
Mineyev, D. A., Lavrisheva, T. I., and Bykova, A. V. YTTRIAN BASTNAESITE, AN ALTERATION PRODUCT OF GAGARINITE	644
Ivanov, V. S. COMPOSITION OF BIOTITE IN GRANITOIDS, AS INFLUENCED BY TEMPERATURE AND CHEMICAL ACTIVITY OF POTASSIUM	649
Pavlov, V. A., and Yashukhin, O. I. POTASSIUM-FELDSPHATHIZATION AND GREISENIZATION OF KOKTENKOL GRANITE MASSIF (CENTRAL KAZAKHSTAN)	658
Kolotilov, D. I., and Goryayev, S. M. ORE-FORMING CHROME SPINELS OF KEMPIRSAY ULTRABASIC MASSIF: RELATION OF THEIR CHEMICAL COMPOSITION TO LATTICE PARAMETERS	670
Shpanov, Ye. P., Sidorenko, G. A., and Stolyarova, T. I. AKDALAITE, A NEW HYDRATED VARIETY OF ALUMINA	675
Dmitriyev, S. D. RELIABILITY OF METHODS OF INVESTIGATION OF MINERAL-FORMING SOLUTIONS AND PNEUMATOLYTIC DEPOSITION OF MINERALS	681
Frolov, A. A. VERTICAL ZONATION IN DEPOSITION OF ORE, AS IN ULTRABASIC-ALKALINE ROCKS AND CARBONATITES	685
Kepezhinskas, V. V., Mossakovskiy, A. A., and Saltykovskiy, A. Ya. UPPER PALEOZOIC VOLCANIC ROCKS OF THE CIS-KHENTEY BASIN (MONGOLIAN PEOPLE'S REPUBLIC)	696
Tarakanov, L. V. GEOTECTONIC POSITION OF VAYGACH ISLAND	704
Kaminskiy, F. V. ECLOGITIC ROCKS IN EASTERN PART OF THE ALDAN SHIELD	712
Syrtsio, L. F., Zalashkova, N. Ye., Zorina, M. L., and Sokolova, Ye. P. MICAS IN METASOMATICALLY ALTERED GRANITES OF THE ACID SERIES	717
Bush, V. A., Kiryukhin, L. G., and Sinitsyn, F. Ye. TECTONICS OF THE SYR-DAR'YA SYNECLISE	730

INTERNATIONAL GEOLOGY REVIEW

MAY (continued)

Aprelkov, S. Ye., and Kharchenko, Yu. I. ACCUMULATIONS OF GOLD-POLYMETALLIC AND GOLD-SILVER ORES IN SOUTHERN KAMCHATKA	740
Lisitsin, A. K. RATIO OF THE REDOX EQUILIBRIA OF URANIUM AND IRON IN STRATIFORM AQUIFERS	744
Sorokin, V. N., and Lomakin, G. V. AURIFEROUS MINERAL ASSOCIATIONS OF MINDYAK ORE FIELD	752
Khodakovskiy, I. L., and Mishin, I. V. SOLUBILITY PRODUCTS OF CALCIUM MOLYBDATE AND CALCIUM TUNGSTATE: RATIO OF POWELLITE TO SCHEELITE MINERALIZATION UNDER HYDRO- THERMAL CONDITIONS	760
Bektemirov, A. I., and Safonov, Yu. G. ENDOGENIC MINERALIZATION OF SYMAP MERCURY DEPOSIT (SOUTHERN FERGANA)	769
Razin, L. V. PROBLEM OF THE ORIGIN OF PLATINUM METALLIZATION OF FORSTERITE DUNITES	776
Kortsenshteyn, V. N. IN REFERENCE TO "HYDROVOLCANISM"	789
Ivanchuk, P. P. HYDROVOLCANISM, A NATURAL PHENOMENON NOT PREVIOUSLY DESCRIBED IN THE GEOLOGICAL LITERATURE	794
Fedorov, Ye. Ye. PRECAMBRIAN GEOLOGY OF CENTRAL MONGOLIA	797

REVIEW SECTION

Dobretsov, N. L., Reverdatto, V. V., Sobolev, V. S., Sobolev, N. V., and Khlestov, V. V. THE FACIES OF METAMORPHISM	801
Senderov, E. E., and Khitarov, N. I. THE ZEOLITES, THEIR SYNTHESIS AND CONDITIONS OF FORMATION IN NATURE	801
Louis, P. CONTRIBUTION GEOPHYSIQUE A LA CONNAISSANCE GEOLOGIQUE DU BASSIN DU LAC TCHAD	801
Rukhin, L. B. PRINCIPLES OF LITHOLOGY	802
Sinitsyn, V. M. ANCIENT CLIMATES OF EURASIA	802
Ivanova, T. N., Executive Editor GEOLOGICAL STRUCTURE AND APATITE POTENTIAL OF SYNNYRIAN MASSIF	803
Yeganov, E. A. SIBERIAN AND FAR-EASTERN GEOSYNCLINAL PHOSPHORITES	804
Karyakin, A. E. STRUCTURES OF ORE FIELDS OF MAGMATIC ORE DEPOSITS	805

MAY (concluded)

- Shcherba, G. N. et al.
GEOLOGY AND METALLOGENY OF USPENSKAYA ZONE, CENTRAL
KAZAKHSTAN 806

- Gorbunov, G. I.
GEOLOGY AND GENESIS OF SULFIDIC COPPER-NICKEL ORE DEPOSITS IN
PECHENGA DISTRICT 806

REFERENCE SECTION

- PREPUBLICATION NOTICES OF NEW BOOKS (NOVYYE KNIGI), 1970, nos. 43-52;
1971, nos. 1-3 808

JUNE

- Strakhov, N. M.
PROGRAM AND METHOD IN STUDIES OF GEOCHEMISTRY OF ELEMENTS
IN THE SEDIMENTATION CYCLE 815

- Bylino, L. V., Makarov, V. G., Bordon, I. P., Zarzhitskiy, G. F., Bordon, V. Ye.,
Krivodubskaya, Z. V., Puura, V. A., Fedorenko, Ya. D., Menaker, Ye. A.,
and Vasil'yev, V. A.
PERSPECTIVES IN PROSPECTING FOR ORES IN BELORUSSIYA AND THE
BALTIC REGION 826

- Lugov, S. F., Pokrovskiy, S. D., Bresler, S. M., Khazova, V. I., and Khazov, R. A.
GEOLOGICAL CHARACTERISTICS OF SOUTHERN PART OF BALTIC SHIELD;
PROSPECTS OF FINDING TIN AND TUNGSTEN ORES 835

- Borzenko, G. F., and Sklyarov, R. Ya.
THE COPPER BASIN OF ANGARA REGION 842

- Bol'shakov, A. P., and Ptushko, L. I.
ALTERATION PRODUCTS OF MELANTERITE FROM NIKITOV MERCURY
ORE DEPOSITS 849

- Karbivnichiy, I. N.
GOLD-ORE AND PLACER OCCURRENCES ON KAMCHATKA 855

- Yudin, B. A., and Zak, S. I.
TITANIUM DEPOSITS OF NORTHWESTERN USSR (EASTERN PART OF
BALTIC SHIELD) 864

- Tarasenko, T. V.
MORPHOGENETIC TYPES OF MERCURY DEPOSITS OF KORYAK HIGHLAND 873

- Kats, Ya. G., and Sokolov, B. A.
ARTICULATIONS OF ALPINE-MEDITERRANEAN FOLDED BELT WITH
GONDWANA PLATFORMS; TECTONIC DISTINCTIONS OF THE ZONE 878

- Bondarenko, V. M., Viktorov, G. G., and Tarkhov, A. G.
APPLICATION OF GEOCOSMIC METHOD IN SOLUTION OF CERTAIN
ENGINEERING-GEOLOGICAL PROBLEMS 884

- Pronin, V. G.
GEOLOGIC STRUCTURE OF MYNSUALMAS "CHINKS" 894

- Nozhkin, A. D.
PRECAMBRIAN STRATIGRAPHY OF NORTHEASTERN PART OF YENISEY RIDGE . . 899

- Chernysheva, V. I.
GREENSTONE-ALTERED ROCKS OF RIFT ZONES IN MEDIAN RIDGES OF
INDIAN OCEAN 903

JUNE (concluded)

Zhambyn, Byamba	
THE WENDIAN AND LOWER CAMBRIAN OF NORTHERN MONGOLIA	914
Konstantinov, A. K., and Lebedev-Zinov'yev, A. A.	
CONTACT METAMORPHISM OF ALKALIC VOLCANITES ASSOCIATED WITH THE INTRUSION OF NEPHELINE SYENITES	922
Rozen, O. M.	
CONVERSION OF CHEMICAL ANALYSES OF SEDIMENTOGENE SCHISTS TO COMPONENTS OF SEDIMENTARY ROCK	933
Kutolin, V. A.	
ROLE OF ASSIMILATION OF MANTLE MATERIAL IN PETROGENESIS OF BASALTS	943
Belov, A. A.	
"NON-STOP" GEOSYNCLINAL DOWNWARPS IN THE ALPINE FOLDED REGION . . .	948
Solovov, A. P., Dosanova, B. A., and Kosheleva, I. A.	
ANALYSIS OF RESULTS OF LITHOCHEMICAL EXPLORATION IN METALLOGENIC PROSPECTING	954
Balakshin, G. D., and Plyaskina, R. A.	
STRUCTURE OF BASE IN DALDYN-ALAKITSKIY DIAMOND FIELD	966
Koryakin, A. S.	
RESULTS OF A STUDY OF PROTEROZOIC WEATHERING CRUSTS IN KARELIA . . .	973
Kim, Yu. I.	
KARST BAUXITE REGION OF TURGAY	981

REVIEW SECTION

Zhdanov, M. A.	
PRODUCTION GEOLOGY OF OIL AND GAS AND ESTIMATION OF RESERVES OF OIL AND GAS	990
Kravtsov, A. I.	
GEOLOGICAL CONDITIONS FOR ACCUMULATION OF GAS IN DEPOSITS OF COAL AND OF ECONOMIC MINERALS, METALLIC AND NONMETALLIC	991
Vasil'yev, V. G., Senior Editor	
GAS FIELDS OF THE USSR	992
Bok, I. I., Executive Editor	
GEOLOGY AND MINERALOGY OF POLYMETALLIC AND COPPER ORE DEPOSITS IN SOUTHERN KAZAKHSTAN	992
Shakhov, F. N., and Il'yenok, S. S., Editors	
GEOLOGY OF GOLD ORE FIELDS OF SIBERIA	993
Subbotin, S. I., Executive Editor	
GEOPHYSICAL INVESTIGATIONS AND TECTONICS OF SOUTH OF THE EUROPEAN PART OF THE USSR	993
Gol'braykh, I. G., et al.	
MORPHOSTRUCTURAL METHODS IN STUDY OF TECTONICS IN PLATFORMAL OIL-GAS DISTRICTS UNDER SEDIMENTARY BLANKET	994

REFERENCE SECTION

PREPUBLICATION NOTICES OF NEW BOOKS (<u>NOVYYE KNIGI</u>), 1971, nos. 4-9	995
---	-----

JULY

Bur'yanova, Ye.Z., Kasatov, B. K., and Trifonov, N. P. NEW DATA ON OTAVITE	1001
Al'mukhamedov, A. I., and Nesterenko, G. V. TWO CONCENTRATION PEAKS ON SULFIDE MINERALS IN DIFFERENTIATED TRAPROCKS OF SIBERIAN PLATFORM	1010
Milovskiy, A. V., Chitayeva, N. A., and Tang Ch'ung-t'uan CHARACTERISTICS OF SELENIUM AND TELLURIUM DISTRIBUTION IN MINERAL ASSOCIATIONS OF ORES OF THE PRIORSK DEPOSIT	1017
Zakharov, E. E. AURIFEROUS MESOZOIC METASOMATITES IN CRYSTALLINE BASE OF THE CENTRAL ALDAN DISTRICT	1024
Kolosova, T. B., and Onishchuk, Yu. V. A NEW TYPE OF GOLD-ORE MINERALIZATION IN EASTERN TRANSBAYKAL	1027
Iljina, T. G. THE PROBLEM OF ORIGIN OF HEXACORALS	1036
Lyakhovich, V. V. INDICATIONS OF ORE-GENERATING CAPACITY OF GRANITOIDS	1045
Ivankin, P. F., Dolgushin, S. S., and Rabinovich, K. R. METALLOGENIC ASYMMETRY IN "COMPOSITIONALLY VARIEGATED" BATHOLITHIC GRANITOID FORMATION	1054
Yakovlev, Yu. N., Goncharov, Yu. V., Neradovskiy, Yu. N., and Alekseyev, A. I. NICKEL-SULFIDE ORES IN ULTRABASITES OF KHABARNYY MASSIF (SOUTH URALS)	1062
Kapsamun, V. P. SMALL INDEPENDENT INTRUSIVES OF THE IKH-KHAIRKHAN AREA (CENTRAL MONGOLIA)	1069
Ivanov, V. S., Khudolozhkin, V. O., and Nikitina, N. M. CRYSTALLIZATION OF ALKALIC FELDSPAR PHENOCRYSTS AND ORIGIN OF PERTHITES IN GRANITOIDS (AS IN CERTAIN INTRUSIVES IN NORTHEAST USSR)	1076
Zhabin, A. G. PRIMARY TEXTURAL-STRUCTURAL FEATURES OF CARBONATITES AND THEIR METAMORPHIC EVOLUTION	1087
Vorontsov, A. Ye., Lin, N. G., and Matveyeva, L. N. CERTAIN PROBLEMS IN PETROLOGY OF HYBRIDIZATION OF LOWER PALEOZOIC GRANITOIDS OF CENTRAL PART OF EASTERN SAYAN	1097
Kropotkin, P. N., and Valyayev, B. M. ROCK SALT IN DEEP GRABENS AND IN BASINS WITH CRUST OF OCEANIC TYPE . . .	1104
Platonov, A. N., Shadlun, T. N., Polyakova, O. P., and Dobrovol'skaya, M. G. POLYTYPISM OF NATURAL SPHALERITE AND ITS TYPOMORPHIC SIGNIFICANCE	1117
Burshtar, M. S., Okun'kova, F. E., and Teodorovich, G. I. APPRAISALS OF HYDROCARBON POTENTIALS OF SEDIMENTS ON GEOLOGICAL PREMISES	1128
Gipsh, A. A., and Kapaturin, G. G. RELATION BETWEEN NATURAL RADIOACTIVITY AND ASH CONTENT OF VORKUTA COALS	1137

INTERNATIONAL GEOLOGY REVIEW

JULY (concluded)

REVIEW SECTION

Erzhanov, Zh. S., and Yegorov, A. K. THEORY OF FOLDING IN THE BODY OF ROCKS	1141
Vasil'kovskiy, N. P., Executive Editor GEOLOGY OF THE ZONE OF TRANSITION FROM THE ASIAN CONTINENT TO THE PACIFIC OCEAN	1141
Mamykin, P. S., Editor PETROGRAPHY OF REFRACTORIES, SLAGS, AND SYNTHETIC MINERALS.	1142
Pek, A. A. DYNAMICS OF JUVENILE SOLUTIONS	1142
Tkachuk, L. G., Executive Editor DISTRIBUTION CHARACTERISTICS OF HYDROTHERMAL MINERALIZATION IN STRUCTURAL STAGES OF THE CARPATHIANS	1143
Voytkovskiy, K. F., Executive Editor FOUNDATIONS FOR CONSTRUCTIONS ON FROZEN GROUND IN YAKUTIA	1143
Maksimov, V. P., et al. SPECIAL ASPECTS OF INDUSTRIAL ASSIMILATION OF OIL FIELDS IN WESTERN SIBERIA	1144
Kuznetsov, N. T. WATERS OF CENTRAL ASIA	1144
Stradomskiy, V. B., Editor HYDROCHEMICAL DATA	1145
Popov, O. V. SUBSURFACE DISCHARGE INTO STREAMS	1145
Goleva, G. A. HYDROGEOCHEMICAL PROSPECTING FOR BLIND ORES	1145
Savchenko, N. A. FIAGDONIAN ORE FIELD	1146
Bartosh, T. D., et al. GEOLOGY AND RESERVES OF FRESH-WATER LIME IN LATVIAN SSR.	1146
Maslov, N. N. PRINCIPLES OF GROUND MECHANICS AND ENGINEERING GEOLOGY	1147
Dobrovol'skiy, A. D., Executive Editor HYDROLOGY OF PACIFIC OCEAN	1147

REFERENCE SECTION

PREPUBLICATION NOTICES OF SOVIET BOOKS (<u>SOVETSKIYE KNIGI</u>)	1148
--	------

AUGUST

Moiseyenko, F. S. CERTAIN INFERENCES FROM CORRELATIONS OF DEEP AND NEAR-SURFACE STRUCTURE OF EARTH'S CRUST IN SOUTHERN MOUNTAIN FRAME OF SIBERIA	1155
Belyayev, I. V., Bronshteyn, B. M., Kostylev, Ye. N., Moskvina, Ya. G., Sedov, B. M., and Filimonov, B. N. DEEP STRUCTURE OF ANADYR' OIL-GAS BASIN, FROM GEOPHYSICAL DATA	1167

AUGUST (concluded)

Zolotukhin, V. V., and Ryabov, V. V. TALNACHITE, A VARIETY OF THE TROCTOLITE TYPE OF NORIL'SK GABBRO-DOLERITES	1172
Petrov, M. P. COMPOSITION OF EOLIAN DUST IN SOUTHERN TURKMENIA, AS IN DUST STORM OF JANUARY, 1968	1178
Konev, A. A., Lebedeva, V. S., Kashayev, A. A., and Ushchapovskaya, Z. F. AZOPROITE, A NEW MINERAL OF THE LUDWIGITE GROUP	1183
Shakhot'ko, L. I. PETROLOGY OF MULTIPLE DIKES AND RELATED STRATIFORM INTRUSIONS IN LOWER TUNGUSKA BASIN	1189
Lazarenko, Ye. K., and Korolev, Yu. M. TARASOVITE - A NEW DIOCTAHEDRAL ORDERED MIXED-LAYER MINERAL	1199
Volin, A. P., and Dyuryagin, B. S. TRAVEL-TIME CURVES OF REFLECTED WAVES INTERPRETED ON PRINCIPLE OF CONJUGATE POINTS	1209
Telezhenko, V. P., Kanareykin, B. A., Tsivinskaya, Yu. V., Frolova, L. A., Doroginskaya, L. M., and Kim, A. I. CERTAIN FEATURES OF DYNAMIC CHARACTERISTICS OF REFLECTED WAVES IN THE UST'-BALYK OIL FIELD	1218
Reverdatto, V. V. TYPES OF CONTACT METAMORPHISM	1225
Golubev, V. S. THERMODYNAMIC CONDITIONS OF MIGRATION AS FACTOR IN METASOMATIC ZONATION	1230
Koval', P. V., Yurchenko, S. A., and Nikolayeva, D. Kh. PARAGENETIC TYPES OF MUSCOVITE FROM APOGRANITES OF TRANSBAYKAL . .	1233
Sergeyeva, N. Ye. ELECTRON-MICROSCOPE STUDY OF MICROMORPHOLOGY OF PICROILMENITE FROM THE KIMBERLITE PIPES OF YAKUTIA	1242
Milyukov, Ye. M. IMMISCIBILITY IN MAGMA AND ARTIFICIAL SILICATE MELTS AND GLASSES . . .	1247
Shinkarev, N. F., and Kuznetsov, A. A. HETEROGENEITY OF MAGMAS IN RELATION TO THEIR VOLATILE CONSTITUENTS	1251
Karpinskaya, T. B. EXPERIMENTAL DATA ON INTRUSION OF ARGON INTO MUSCOVITE, IN RELATION TO GEOCHRONOLOGY	1257
Bgatov, V. I., and Kazarinov, V. P. PROBLEM OF LATERITIC BAUXITES OF SIBERIA	1263
Zhabin, A. G., and Sveshnikova, Ye. V. MAGMATIC CANCRINITE	1269

REFERENCE SECTION

PREPUBLICATION NOTICES OF NEW BOOKS (<u>NOVYYE KNIGI</u>), 1971, nos. 10-17 . . .	1275
---	------

SEPTEMBER

EDITORIAL	v
Mavrin, K. A. TECTONIC EVOLUTION OF ORENBURG AREA ADJACENT TO URAL	1279
Poltorykhin, P. I. ASPECTS OF METALLOGENY OF KYZYLOVSKAYA ZONE OF FOLDING (WESTERN KALBA)	1287
Arutyunyan, R. A. GENETIC TYPES OF GOLD ORES AND INDICATIONS OF MEGRINSKIY PLUTON . . .	1290
Krutov, G. A., Vinogradova, R. A., and Kiseleva, I. A. CHLORINIFEROUS MINERALS AND CERTAIN PROBLEMS IN GENESIS OF METASOMATIC MAGNETITE ORE DEPOSITS IN MUL'GA-BURLUK AND KRASNOKAMENKA GROUPS, EASTERN SAYAN	1293
Golubev, V. S. THEORY OF METASOMATIC ZONATION WITH PARALLEL REACTIONS	1303
Titayeva, N. A. AGE DETERMINATION OF QUATERNARY DEPOSITS AS INDICATED BY IONIUM METHOD APPLIED TO RELICS OF BONES	1308
Akul'shina, Ye. P., and Pisareva, G. M. SOME QUANTITATIVE INDICES OF MATERIAL COMPOSITION OF CLAY PORTION OF ROCKS AND THEIR RELATION TO WEATHERING	1312
Materikov, M. P., and Sirina, T. N. A NEW TYPE OF TIN ORE IN EASTERN KAZAKHSTAN	1318
Yendrikhinskiy, A. S. LITHOGENETIC CHARACTERISTICS OF QUATERNARY DEPOSITS OF VITIM PLATEAU	1323
Kashirin, K. F. PETROCHEMICAL AND GEOCHEMICAL CHARACTERISTICS OF NEPHELINE SYENITES OF NORTHERN BAYKAL HIGHLAND	1330
Mironenko, O. A. CLAY MINERALS IN JURASSIC DEPOSITS OF NORTHERN FERGANA IN RELATION TO PALEOCLIMATE	1339
Lazarev, I. S., and Vdovichenko, G. M. KARST AND SEDIMENTS UNDERGROUND AT GAURDAK SULFUR DEPOSIT	1345
Nozhkin, A. D., Moleva, V. A., and Chubkova, T. P. DISCOVERY OF JARLITE IN THE USSR	1351
Lebedeva, A. I., and Piskizhova, I. M. LITHOLOGIC-GEOCHEMICAL CHARACTERISTICS AND FORMATION CONDITIONS OF ORDOVICIAN PHOSPHATIFEROUS CARBONATE ROCKS IN LENINGRAD AREA AND ESTONIA	1355
Kaplan, M. Ye. CRITERIA FOR DETERMINING ZONES OF CATAGENESIS IN TERRIGENOUS DEPOSITS	1365
Osipov, B. S., and Rafal'skiy, R. P. ALTERATION AND REGENERATION OF SULFIDES BY REACTION WITH OXIDIZING HYDROTHERMAL SOLUTIONS.	1377
Dobretsov, N. L., Melamed, V. G., and Sharapov, V. N. DYNAMICS OF REGIONAL METAMORPHISM, USING A MODEL OF "SIMPLE SINKING" OF A CRUST OF OCEANIC TYPE	1382

SEPTEMBER (concluded)

Nekrasov, Ye. M. CHANGES IN IRON CONTENT IN SPHALERITES IN RELATION TO STRUCTURAL CONDITIONS AND LOCALIZATION OF ORES IN KOLST DEPOSIT	1388
TENTH ANNIVERSARY OF THE JOURNAL <u>GEOLOGIYA</u> I <u>GEOFIZIKA</u>	1396

OCTOBER

Vinogradov, V. I., Chernyshev, I. V., and Shanin, L. L. ISOTOPIC COMPOSITION OF SULFUR IN MODERN METALLIFEROUS HYDROTHERMS IN CHELEKEN	1401
Bogdanov, Yu. V., and Golubchina, M. N. ISOTOPIC COMPOSITION OF SULFUR IN STRATIFIED DEPOSITS OF COPPER ORES IN OLEKMA-VITIM MONTANE AREA	1405
Grinenko, L. N., Grinenko, V. A., Zagryazhskaya, G. D., and Stolyarov, Yu. M. GENESIS OF LEVIKHA ORES IN RELATION TO ISOTOPIC COMPOSITION OF THEIR SULFUR	1418
Chukhrov, F. V. ISOTOPIC COMPOSITION OF SULFUR AND GENESIS OF COPPER ORES OF ZDHEZKAZGAN AND UDOKAN	1429
Khlestov, V. V. CHARACTERISTICS OF METAMORPHIC PROCESSES IN EARLY PRECAMBRIAN	1435
Mel'nik, Yu. P., and Yaposhchuk, M. A. WATER DEFICIENCY AS A FACTOR IN METAMORPHISM OF ROCKS	1439
Semenov, A. S. NATURE OF ELECTRICAL CONDUCTIVITY OF THE ANCIENT CRYSTALLINE BASE	1447
Burshtar, M. S., and Nazarov, D. A. METHOD FOR DESIGN OF GENERALIZED REGIONAL MAPS OF PALEOHYDRO- DYNAMIC ENVIRONMENTS	1452
Azizbekov, S. A., and Dzotsenidze, G. S. MAGMATISM IN THE CAUCASUS, IRAN AND TURKEY	1464
Geodekyan, A. A. HYDROCARBON POTENTIAL OF THE SHELVES	1471
Pecherskiy, D. M., and Fin'ko, V. I. THERMOMAGNETIC CHARACTERISTICS OF MINERALS AS INDICATORS OF THE SEQUENCE OF THEIR CRYSTALLIZATION IN ACIDIC EFFUSIVES (AS IN FAR EASTERN PUMICE)	1475
Rudich, K. N. GEOLOGIC POSITION OF SUBVOLCANIC BODIES AND THEIR INTRUSIVE MECHANISM	1482
Germanov, A. I., Panteleyev, V. M., and Golubovich, V. N. CERTAIN ASPECTS OF GEOCHEMISTRY OF COPPER IN DZHEZKAZGAN	1492
Valyashko, M. G., and Agoshkov, V. M. EXPERIMENTALLY PROVED RELATIONSHIPS IN ZONAL SMELTING IN MULTICOMPONENT SYSTEMS AND THEIR GEOCHEMICAL SIGNIFICANCE	1501
Belov, N. V., Belova, Ye. N., Litvinskaya, G. P., and Kharitonov, Yu. A. SILICIFICATION, SILICOSIS, POLYMERIZATION, AND ALUMINOSIS IN GEOCRYSTALLOCHEMISTRY OF SILICATES AND ALUMINOSILICATES	1510

INTERNATIONAL GEOLOGY REVIEW

OCTOBER (concluded)

Gorbachev, V. F., and Vasyanov, G. P. GEOLOGICAL INDICATIONS IN PROSPECTING FOR RESIDUAL OR REDEPOSITED KAOLINS IN MESOZOIC WEATHERED CRUST, URAL	1523
Nekrasov, I. Ya. FEATURES OF TIN MINERALIZATION IN CARBONATE DEPOSITS, AS IN EASTERN SIBERIA	1532
Li, L. V., and Nelyubov, V. A. STRUCTURAL CHARACTERISTICS OF DEPOSITION OF GOLD ORES IN PARTS OF YENISEY RIDGE	1543
Zolotarev, B. P., and Semenov, G. S. DISTRIBUTION OF THORIUM, URANIUM, AND POTASSIUM IN ROCKS OF THOLEIITE-BASALTIC SERIES	1548
Kharin, G. S., and Lel'chuk, V. I. INDICATIONS OF A DEVONIAN ARTESIAN BASIN IN KUZBASS	1558
Lavrovich, N. N. CONTRIBUTION TO HISTORY OF PROTEROZOIC UDOKAN SERIES IN SIBERIA	1560
Vin'kovetskiy, Ya. A. GEOLOGICAL DATA ON GENESIS OF SECONDARY QUARTZITES IN THE HERCYNIDES, CENTRAL KAZAKHSTAN	1565

REVIEW SECTION

Lazarenko, E. K. COURSE IN MINERALOGY	1573
Vassoyevich, N. B., Executive Editor ORGANIC SUBSTANCE OF MODERN AND FOSSIL SEDIMENTS	1577
Gnibidenko, G. S., Executive Editor GEOLOGY AND GEOPHYSICS OF PACIFIC BELT	1577
Sokolovskiy, E. V. APPLICATION OF RADIOACTIVE ISOTOPES IN CONTROL OF EXPLOITATION OF OIL DEPOSITS	1577
Mamayev, N. F., and Papulov, G. N., Executive Editors PRECAMBRIAN AND LOWER PALEOZOIC STRATIGRAPHY AND LITHOLOGY OF URAL	1578

REFERENCE SECTION

PREPUBLICATION NOTICES OF NEW BOOKS (<u>NOVYYE KNIGI</u>), 1971, nos. 16-25 . . .	1580
Matsnev, E. P. ADVICE TO BEGINNER REFEREES	1583

NOVEMBER

Kuznetsov, Yu. A. PRINCIPAL TYPES OF MAGMA-CONTROLLING STRUCTURES AND MAGMATIC FORMATIONS	1585
Narkelyun, L. F., Filin, A. M., Bezrodnykh, Yu. P., and Trubachev, A. I. CUPRIFEROUS SHALES IN POLAND AND THEIR ANALOGUES IN E. USSR	1600
Doroshenko, N. I., Sinayskiy, S. A., and Stavinskiy, V. A. LOCALIZATION CONDITIONS OF TIN ORES IN SARYDZHAY MINING DISTRICT . . .	1611

NOVEMBER (continued)

- Kitayev, N. A., Sarapulova, V. N., and Korotayeva, I. Ya.
Ag/Au RATIO IN PRIMARY HALOS OF BAILEY GOLDFIELD 1622
- Lur'ye, L. M., Shadlun, T. N., Ugaste, Yu. A., and Vyal'sov, L. N.
LEAD, SILVER, AND COPPER SULFIDISMUTHITE FROM THE BENJAMINITE-
PAVONITE GROUP IN KAPTARKHAN ORE DEPOSIT, EAST KARAMAZAR,
CENTRAL ASIA 1628
- Solov'yev, N. S.
BEHAVIOR OF URANIUM AND THORIUM DURING EVOLUTION OF MESOZOIC
VOLCANIC APPARATUSES IN TRANSBAYKAL 1642
- Nepeyina, L. A., and Obolenskiy, A. A.
MERCURY IN SUBSURFACE AND MINE WATERS AT AKTASH ORE DEPOSIT 1647
- Trofimov, V. S.
THE MEANING OF "KIMBERLITE" 1652
- Perchuk, L. L., and Surikov, V. V.
THERMODYNAMIC PROBLEMS OF DISTRIBUTION OF CATIONS IN
SUPERLATTICES OF MINERALS 1657
- Shcherban', I. P., and Shirokikh, I. N.
THERMODYNAMIC AND EXPERIMENTAL DATA ON STABILITY OF GYPSUM,
HEMIHYDRATE, AND ANHYDRITE UNDER HYDROTHERMAL CONDITIONS . . . 1671
- Makagon, V. M., and Shmakin, B. M.
TRICLINICITY AND BARIUM CONTENT OF POTASSIUM FELDSPARS FROM
MUSCOVITE PEGMATITES 1674
- Khar'kov, A. D., Belik, Yu. P., and Ilupin, I. P.
"CUBOIDS" OF PYROPE FOUND IN SIBERIAN PLATFORM 1680
- Garmash, A. A., Stuchevskiy, N. I., Rubo, G. L., Kondratov, A. I., and Dubov, V. G.
LOCALIZATION CONDITIONS OF LENTICULAR LAYERS OF POLYMETALLIC
ORES IN IRTYSH ZONE OF BUCKLING, AS IN BELOUSOVSKOYE ORE
DEPOSIT 1684
- Akramovskiy, I. I.
TECTONICS OF ANADYR' BASIN (NORTHEASTERN END OF ASIATIC FORK
OF CIRCUMPACIFIC MOBILE BELT) 1697
- Brandt, S. B., Zonenshayn, L. P., Kovalenko, V. I., Kuz'min, M. I., and Nagibina, M. S.
MESOZOIC ALKALIC-GRANITIC VOLCANO-PLUTONIC FORMATION OF EASTERN
MONGOLIA (EXAMPLE OF DASHI BALBAR PLUTON) 1706
- Verzilin, N. N.
FORMATION OF AUTHIGENIC CLAYS IN MESOZOIC SEDIMENTS OF
FERGANA DEPRESSION 1712
- Blyuman, B. A., Ivanova, B. P., Krasavina, T. N., and Khoreva, B. Ya.
THERMOGRAPHIC EXPRESSION OF THE LEVEL OF METAMORPHISM OF
CARBONACEOUS ROCKS, AS IN WESTERN UZBEKISTAN 1722
- Smirnov, S. I.
SOME PROBLEMS OF REGIONAL DYNAMICS OF SUBSURFACE WATERS IN
CONNECTION WITH HYDROGEOCHEMICAL PRINCIPLES 1726
- Rezvoy, D. P.
PROBLEM OF "THRUST SHEETS" IN THE ALAY RANGE 1735
- Katin, K. P., and Tolstunov, V. L.
RESISTANCE OF ROCKS TO CRUSHING; SHAPES OF "PYRAMIDS" PRODUCED
BY UNIAXIAL COMPRESSION, AS INFLUENCED BY ORIENTATION OF
GRAINS OF THE ROCK-FORMING MINERALS 1744

INTERNATIONAL GEOLOGY REVIEW

NOVEMBER (concluded)

- Sobolev, R. N., Borshchevskiy, Yu. A., and Shul'ga, V. M.
THE K-Ar AGE OF KAZAKHSTAN GRANITOIDS, AS INFLUENCED BY
HYBRIDIZATION 1746
- Plusnina, I. I., Maleyev, M. N., and Yefimova, G. A.
INFRARED-SPECTROSCOPIC INVESTIGATION OF CRYPTOCRYSTALLINE
VARIETIES OF SILICA 1750
- Suvorov, A. A., Zhil'tsov, E. G., Kulikov, A. A., and Alekseyev, B. V.
STRUCTURE OF TERRESTRIAL CRUST IN SOUTHERN SAKHALIN AND
ADJACENT AQUATORIA 1755
- Borovskikh, N. P.
GEOLOGICAL NATURE OF RUBTSOVSK GRAVITY MAXIMUM 1763

DECEMBER

- Mustafayev, K. A.
APPLICATION OF SEISMIC EXPLORATION FOR DIRECT SEARCH OF MULTI-
LAYERED PETROLIFEROUS OIL FIELDS, AZERBAIDZHAN 1769
- Lisitsyn, A. Ye., and Malinko, S. V.
PHYSICO-CHEMICAL CONDITIONS FOR DEVELOPMENT OF BOROSILICATES
AND BORATES IN LIMY SKARN FORMATION 1773
- Marakushev, A. A., and Bezmen, N. I.
CHEMICAL AFFINITY OF METALS FOR OXYGEN AND SULFUR 1781
- Kuznetsov, V. A.
TRANSFERS OF TITANIUM, ZIRCONIUM, AND HAFNIUM IN HIGH-
TEMPERATURE SOLUTIONS 1795
- Shabynin, L. I.
DEPOSITION OF MAGNETITE ORES, MAGMATIC STAGE, IN THE MAGNESIO-
SKARNAL ORE-BEARING FORMATION 1798
- Sharapov, V. N., Golubev, V. S., and Sotnikov, A. B.
FORMATION DYNAMICS OF FILLED VEINS DURING DRAINAGE 1806
- Bershov, L. V.
ISOMORPHISM OF TITANIUM IN NATURAL MINERALS 1813
- Sidorenko, A. V., and Lukashev, K. I.
SOME PROBLEMS OF THE GEOCHEMISTRY OF THE SUPERGENE ZONE 1820
- Razumova, V. N.
HYDROTHERMAL MONTMORILLONITE CLAYS AS PARENT MATERIALS
OF WEATHERED CRUST ON ADZHARIAN SHORE OF BLACK SEA 1829
- Grachev, A. F., and Fedorovskiy, V. S.
SINGLE UNIFIED NATURE OF RIFTS, AULACOGENS AND GEOSYNCLINAL
TROUGHS 1839
- Rudnik, A. F., Sobotovich, E. V., and Iskanderova, A. D.
ISOTOPIC LEAD RATIOS AS BASIS FOR PERIODIZATION OF THE PRECAMBRIAN . . . 1841
- Afanas'ev, G. D.
STRUCTURE AND COMPOSITION OF TERRESTRIAL CRUST IN RELATION
TO PROBLEMS OF GEOLOGICAL PETROLOGY 1852
- Marin, Yu. B.
MINERALOGIC CRITERIA IN DIFFERENTIATION, CORRELATION AND
IDENTIFICATION OF GENETIC AND EVOLUTIONARY CONNECTIONS
OF GRANITOID FORMATION 1873

INTERNATIONAL GEOLOGY REVIEW

DECEMBER (concluded)

- Yefimov, I. A., and Burd, G. I.
REGIONAL METAMORPHISM, AGE AND FORMATION CONDITIONS OF
CERTAIN ABYSSAL PRECAMBRIAN ROCKS IN MUGODZHARY 1886
- Aleshko-Ozhevskiy, Yu. P., Voronov, A. B., Kokovina, G. V., Samoylov, O. Ya.,
and Yastremskiy, P. S.
EFFECT OF CALCIUM ON MIGRATION OF BROMINE DURING META-
MORPHISM OF UNDERGROUND BRINES 1902
- Yegorov, B. L.
DEPOSITION OF URANINITE IN MICROFISSURES OF URANOTHORIANITE 1907

REVIEW SECTION

- Shatalov, E. T., Chief Editor
GEOLOGICAL STRUCTURE OF THE USSR 1911
- Savinov, Yu. A.
QUATERNARY GEOLOGY OF NORTHERN PART OF RUSSIAN PLAIN 1913
- Aslanyan, A. T., and Veguni, A. T., Editors
ARMENIAN SSR. GEOLOGICAL DESCRIPTION 1914
- Tkachev, B. V., and Egiazarov, B. Kh., Editors
ISLANDS OF THE SOVIET ARCTIC. GEOLOGICAL DESCRIPTION 1915
- Gorbatskiy, G. V.
PHYSICOGEOGRAPHICAL REGIONALIZATION OF ARCTICA, Part Two 1915
- Gerasimov, I. P., Chairman of Editorial Board
SOVIET ARCTIC ISLANDS AND SEAS OF ARCTIC OCEAN 1915

ERRATA - VOLUME 13, 1971

Page and month	As published	Correct version
<u>No. 3, March</u>		
p. 410, legend, line 2	V. A. Sokolov	B. A. Sokolov
<u>No. 4, April</u>		
p. iii, Sheynmann abst., line 2	ores	ones
p. iv, Leonov abst., line 7	chromic	chronic
<u>No. 5, May</u>		
p. v, Ivanova review title	SYNNRIAN	SYNNYRIAN
<u>No. 7, July</u>		
p. i, Milovskiy abst., line 4	preference of	preference for
p. 1143, col. 1, line 18	promises	premises
p. 1145, col. 1, line 18	boundaries	ratios
<u>No. 8, August</u>		
p. i, Zolotukhin abst., lines 1 and 4	talnakhite	talnachite
<u>No. 9, September</u>		
p. v, Editorial, line 5	One one	On one
<u>No. 10, October</u>		
p. ii, Contents, line 3	ZDHEZKAZGAN	DZHEZKAZGAN
p. 1429, title	Zdhezkazgan	Dzhezkazgan
p. 1577, col. 1, line 15	NK 70-23(113)	NK 70-23(114)